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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,357	10/20/2003	L. Robert Deardurff	1-36728	4378

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MACMILLAN SOBANSKI & TODD, LLC  
ONE MARITIME PLAZA FOURTH FLOOR  
720 WATER STREET  
TOLEDO, OH 43604-1619

EXAMINER
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DANIELS, MATTHEW J

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/689,357

Applicant(s)

DEARDURFF, L. ROBERT

Examiner

Matthew J. Daniels

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-10 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/7/03.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. **Claims 1-3, 5-10** are rejected under 35 U.S.C. 103(a) as being obvious over Chang (USPN 4150079) in view of Jabarin (USPN 4476170). **As to Claim 1**, Chang teaches a process for preparing a blow molding preform (entire document), comprising:

melting polymer flakes in a plasticating screw extruder (inherent in that some feedstock must be used), to prepare a homogeneous stream of hot polymer melt at the discharge of the extruder (6:51-52);

cooling the polymer melt stream to a temperature at least 20 degrees Centigrade below the extruder discharge temperature, by heat exchange with a heat transfer medium (7:11-15 and 12:37-41 and Fig. 6, Item 44); and

forming the cooled polymer melt into a blow molding preform (7:8-10).

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Chang appears to be silent to a liquid heat transfer medium. However, liquid heat transfer medium for heating and cooling is well known in the art. One example is Jabarin, who teaches oil or water for heating or cooling (7:14-22). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Jabarin into that of Chang in order to provide rapid heating or cooling of a mold. Additionally, the Applicant's disclosure acknowledges that this aspect is conventional in the art. See "conventional quench oil heat transfer system" (Page 5, line 10 of the disclosure). **As to Claims 2 and 3**, Chang teaches polyethylene terephthalate (1:55). **As to Claim 5**, Chang teaches about 300 degrees Celsius (6:51-52). **As to Claim 6**, Chang's teaching of "about 300 Degrees C. when injected into a mold cavity" at 6:51-53 and the melt temperature of polyethylene terephthalate being 270 Degrees C renders obvious the claimed subject matter. Any temperature between 270 and 300 Degrees C would have been prima facie obvious.

2. **As to Claim 7**, Chang teaches a process for preparing a blow molding preform (entire document), comprising:

melting polymer flakes (inherent in that some feedstock must be used), comprising polyethylene terephthalate (5:59-60), in a plasticating screw extruder to prepare a homogeneous stream of hot polymer melt at the discharge of the extruder (6:51-52), the temperature of the polymer melt at the discharge of the extruder being about 300 degrees C (6:52);

cooling the polymer melt stream to a temperature at least 20 degrees Centigrade below the extruder discharge temperature, by heat exchange with a heat transfer medium (7:11-15 and 12:37-41 and Fig. 6, Item 44); and

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forming the cooled polymer melt into a blow molding preform (7:8-10).

Chang appears to be silent to a liquid heat transfer medium. However, liquid heat transfer medium for heating and cooling is well known in the art. One example is Jabarin, who teaches oil or water for heating or cooling (7:14-22). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Jabarin into that of Chang in order to provide rapid heating or cooling of a mold. Additionally, the Applicant's disclosure acknowledges that this aspect is conventional in the art. See "conventional quench oil heat transfer system" (Page 5, line 10 of the disclosure). **As to Claim 8**, Chang teaches polyethylene terephthalate (5:59-60). **As to Claim 9**, Chang's teaching of "about 300 Degrees C. when injected into a mold cavity" at 6:51-53 and the melt temperature of polyethylene terephthalate being 270 Degrees C renders obvious the claimed subject matter. Any temperature between 270 and 300 Degrees C would have been prima facie obvious to one skilled in the art.

3. **As to Claim 10**, Chang teaches a process for preparing a blow molding preform (entire document), comprising:

melting polymer flakes (inherent in that some feedstock must be used), comprising polyethylene terephthalate (5:59-60), in a plasticating screw extruder to prepare a homogeneous stream of hot polymer melt at the discharge of the extruder (6:51-52), the temperature of the polymer melt at the discharge of the extruder being about 300 degrees C (6:52);

cooling the polymer melt stream to a temperature at least 20 degrees Centigrade below the extruder discharge temperature, by heat exchange with a heat transfer medium (7:11-15 and 12:37-41 and Fig. 6, Item 44); and

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forming the cooled polymer melt into a blow molding preform (7:8-10).

Chang appears to be silent to a liquid heat transfer medium and to 260 to 290 Degrees C.

However, these aspects are common in the art. Firstly, liquid heat transfer medium for heating and cooling is well known in the art. One example is Jabarin, who teaches oil or water for heating or cooling (7:14-22). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Jabarin into that of Chang in order to provide rapid heating or cooling of a mold. Additionally, the Applicant's disclosure acknowledges that this aspect is conventional in the art. See "conventional quench oil heat transfer system" (Page 5, line 10 of the disclosure).

Secondly, Chang's teaching of "about 300 Degrees C. when injected into a mold cavity" at 6:51-53 and the melt temperature of polyethylene terephthalate being 270 Degrees C renders obvious the claimed subject matter. Any temperature between 270 and 300 Degrees C would have been prima facie obvious to one skilled in the art. In considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom. See MPEP 2144.01 and *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968). In this case, one skilled in the art would have inferred that any temperature between 270 and 290 C would have been possible in view of a teaching of the melt temperature being 270 C and the explicit teaching of "about 300 Degrees C. when injected into a mold cavity" (emphasis added) in 6:51-53.

4. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (USPN 4150079) in view of Jabarin (USPN 4476170), and further in view of Takahashi

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(USPN 6320014). Chang and Jabarin teach the subject matter of Claim 1. See the rejection of Claim 1 above under 35 USC 103(a). **As to Claim 4**, Chang and Jabarin appear to be silent to the claimed particle size. The Examiner submits that in this case the size of the particle fed into a melt extruder does not materially affect the claimed process, and that any particle size would have been prima facie obvious to the ordinary artisan. However, Takahashi also teaches pellets having an average diameter of 5 mm comprising polyethylene terephthalate (10:10-15). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Takahashi into that of Chang and Jabarin in order to a) provide a dry feed line of material to an injection molding machine or extruder, b) provide pellets that are prevented from scorching, and c) to provide bottles of polyester having excellent properties such as high strength (All are found in Takahashi, 14: 49-62))

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Thursday, 7:30 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianne can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJD 9/9/05

*MJD*

A handwritten signature in black ink, appearing to read "Michael P. Colaianni", with a long horizontal line extending to the right.

**MICHAEL P. COLAIANNI**  
**SUPERVISORY PATENT EXAMINER**